

Red Snapper Captain and Crew Bag Limit Analyses
NOAA Fisheries Service
Southeast Regional Office
Contribution: SERO-SF-05/06-02
May 25, 2006

At the request of Council staff, captain and crew analyses for Amendment 14/27 to the shrimp and reef fish fishery management plans were conducted for consideration by the Gulf of Mexico Fishery Management Council at their March 20-23, 2006, meeting.

Methods

The following is a brief summary of the methods used to complete this analysis.

Captain and Crew Bag Limits

Bag limit analyses for captain and crew were conducted in a similar manner as the bag limit analyses described in SERO (2006). Catch-effort data from the Marine Recreational Fisheries Statistics For-hire Survey (FHS) and SEFSC Headboat Survey were used for analyses. The release mortality rates used in the SEDAR 7 red snapper assessment (SEDAR 2005) were applied to vessels operating in the eastern ($r = 0.15$) and western Gulf ($r = 0.40$). Reductions in fishing mortality by region were first determined for a four red snapper bag limit (status quo). These reductions were assumed to be a function of three factors: 1) non-compliance, 2) captain and crew sharing their catch with paying customers, and 3) multi-day bag limits for trips greater than 24 hours (50 CFR 622.39 (b)(2)). Examination of the intercepts revealed no trips greater than 24 hours, therefore the landings overages were assumed to result only from non-compliance and captain and crew. To examine reductions from captain and crew, two additional persons were added to the number of people contributing to a vessel's catch and the bag limit analyses were re-run. Two persons were chosen since most daily offshore charters operate only with a single captain and one crew member. It was assumed captain and crew were not included in the FHS and Headboat Survey catch-effort estimates. The difference between estimated reductions without two additional captain and crew and with two additional captain and crew was assumed to represent the percent reduction in fishing mortality resulting from captain and crew. The remaining difference was attributed to non-compliance.

Results

Captain and Crew Bag Limits

Prohibiting captain and crew from retaining bag limits of red snapper would reduce overall recreational fishing mortality by 1.9 percent (approximately 24,000 fish, 82,500 pounds), assuming release mortality rates of 0.15 in the eastern Gulf of Mexico and 0.40 in the western Gulf of Mexico (Table 1). The captain and crew reduction is estimated to extend the fishing season by 3 to 6 days. Reductions in harvest are primarily from charter vessels (4.2 percent), although a small reduction in harvest also occurs for headboats (0.3 percent). Estimated reductions would be in addition to reductions for various bag limits summarized in SERO (2006).

References

SEDAR (Southeast Data, Assessment, and Review). 2005. SEDAR 7 Gulf of Mexico red snapper complete stock assessment report. SEDAR, Charleston, South Carolina

SERO (Southeast Regional Office). 2006. Evaluation of bag limits and seasonal closures for the recreational red snapper fishery – draft report. NMFS, SERO, St. Petersburg, Florida.
Contribution: SERO-SF-05/06-01.

Table 1. Estimated reductions in red snapper fishing mortality if captain and crew are prohibited from retaining bag limits of red snapper. Reductions for “All Modes” are weighted by the proportion of landings for each mode and include a zero percent captain and crew reduction for private vessels.

Mode	Eastern Gulf		Western Gulf		Gulfwide	
	r = 0.0	r = 0.15	r = 0.0	r = 0.4	r = 0.0	r = 0.15, 0.4
Charter	7.3	4.5	7.6	1.6	7.3	4.2
Headboat	0.6	0.5	0.3	0.2	0.4	0.3
All Modes	3.5	2.2	1.8	0.4	3.3	1.9